ThermOmegaTech®

TBV-PR

THERMOSTATIC THERMAL BYPASS VALVE WITH PRESSURE RELIEF

BENEFITS

- Self-operating – no external power source required
- Temperature control – controls fluids by sensing over-temperature thermal levels
- Built-in pressure relief simplifies installation and maintenance processes
- Wide temperature range available
- Minimal maintenance needed
- Few moving parts – reduce system wear



DESIGN FEATURES

- Exclusive **Thermoloid**® thermal actuator
- Integrated pressure relief
- Standard valve material is brass or stainless steel
- Reactive, compact, and low mass – fast response
- Corrosion-resistant, long service life

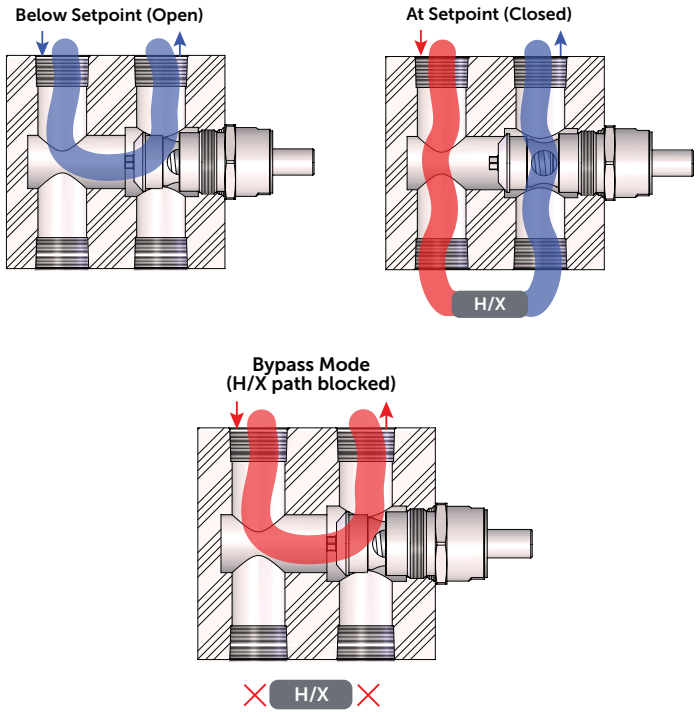
OPERATION

ThermOmegaTech's **Thermal Bypass Valve with Pressure Relief** combines two essential functions into one component. Equipped with a thermal actuator, the valve will modulate open and closed based on temperature changes.

The built-in pressure relief safeguards the system from excessive pressure buildup. If the pressure exceeds a predetermined threshold, the relief valve opens, allowing fluid to escape and reducing pressure to a safe level.

The TBV-PR can be integrated into a 4-way manifold to monitor and divert fluid based on temperature. Cooler fluid goes through the valve bypass, while hotter fluid goes through the system's cooler.

SAMPLE APPLICATION



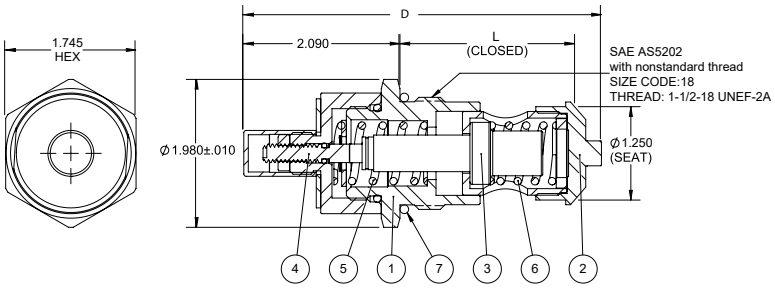
APPLICATIONS

- Cooling Water Control for Radiator or Heat Exchanger
- Electronics System Cooling
- Engine and Compressor Cooling System
- Hydraulic Fluid or Lube Oil Cooling Systems
- Hydraulic Power Units (HPUs)
- Hydraulic or Lube Oil Thermal Bypass
- Loop-type Circulation Systems

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PARTS & MATERIALS



ITEM	DESCRIPTION	MATERIALS
1	BODY	300 Series SS or Brass
2	POPPET	300 Series SS or Brass
3	THERMAL ACTUATOR	300 Series SS or Brass
4	ADJUSTMENT SCREW	300 Series SS
5	OPERATING SPRING	300 Series SS
6	RELIEF SPRING	300 Series SS
7	O-RING	BUNA

DIMENSIONS & CAPACITIES

SIZE	D		L Closed		Weight		C_v	Maximum Operating Pressure	Maximum Temperature
	in	mm	in	mm	Lb	Kg			
SAE-18	4.8	122	2.337	59.4	1.3	0.6	12.6	440 PSI (30.3 BAR)	150°F (66°C) over set-point limit 250°F (149°C)

ORDERING

Part Number[1,2]	Description[3]
1056-00000000X-XXX	SAE-18-TBV-PR-XXX[1]-C360-B-XXX[2]
1056-01000000X-XXX	SAE-18-TBV-PR-XXX[1]-SS-B-XXX[2]
1056-02000000X-XXX	SAE-18-TBV-PR-XXX[1]-S6-B-XXX[2]

NOTES

1. Full open temperatures "XXX" available: 040°F, 050°F, 055°F, 060°F, 065°F, 075°F, 085°F, 090°F, 095°F, 100°F, 105°F, 110°F, 120°F, 125°F, 130°F, 140°F, 150°F, 155°F, 160°F, 170°F, 180°F, 190°F and 200°F.
   a. ***Note: Closing temperature is typically 10°F above opening temperature.***
2. Replace singular "X" with 0 = 025 psig, 1 = 050 psig, 2 = 100 psig, etc.
3. C360 = Brass, SS = 303 Stainless Steel, and S6 = 316/316L Stainless Steel.
4. *Please contact the factory to discuss your application if you require custom body or elastomer materials, pressure options or threads.*
5. Warranty information disclosed at www.thermomegatech.com/terms-conditions/

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Because of continuous improvements, ThermOmegaTech®, Inc. reserves the right to change the design and specifications without notice